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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,259	09/10/2003	Hitoshi Sato	953.1010	4011
21171	7590	12/23/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			TRAN, DIEM T	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,259

Applicant(s)

SATO ET AL.

Examiner

Diem Tran

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the amendment filed on 10/3/05. In this amendment, claim 6 has been added. Overall, claims 1-6 are pending in this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- In claim 6 of the amendment filed on 10/3/05, the applicants added the claimed limitation “*restricting the maximum fuel injection quantity comprises setting an upper limit of the maximum fuel injection quantity*” is considered new matter since the originally filed disclosure does not contain any support for the invention as now claimed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ludecke et al. (US Patent 4,211,075).

Regarding claims 1, 2, Ludecke discloses an internal combustion engine exhaust gas purifying system having a continuous regenerating diesel particulate filter system in an exhaust passage of an internal combustion engine to oxidize and remove collected particulate matter by performing a regenerating-mode operation when a quantity of the collected particulate matter in a filter of the filter system to collect the particulate matter is equal to a predetermined judgment value for regeneration, comprising:

collected-quantity estimation means for estimating the quantity of collected particulate matter in the filter (see col. 4, lines 9-11, 24-30); and maximum-fuel-injection-quantity restricting means for restricting a maximum fuel injection quantity of the internal combustion engine when the quantity of the collected particulate matter estimated by the collected-quantity estimation means is equal to a predetermined judgment value for restriction, the maximum fuel injection quantity restricting means restricting the maximum fuel injection quantity during the regeneration mode operation (see col. 6, lines 6-15).

Regarding claim 5, Ludecke further discloses fuel restriction indicating means for indicating restriction of the maximum fuel injection quantity of the engine (see col. 6, lines 6-19).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ludecke et al. (US Patent 4,211,075) in view of Sato et al. (US Patent 4,535,588).

Ludecke discloses all the claimed limitations as discussed in claim 1 above, however, fails to disclose that the collected-quantity estimation means estimates the quantity of collected particulate matter in accordance with the differential pressure between the upstream and downstream of the filter. Sato teaches that it is conventional in the art, to estimate the quantity of collected particulate matter in accordance with the differential pressure between the upstream and downstream of the filter (see col. 5, lines 20-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the teaching of Sato in the Ludecke system, since the use thereof would have provided a means for initiating the regeneration of the filter.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ludecke et al. (US Patent 4,211,075) in view of Kuenstler et al. (JP 2002-195086).

Ludecke discloses all the claimed limitations as discussed in claim 1 above, however, fails to disclose that the continuous regenerating diesel particulate filter system uses a system constituted by setting an oxidation catalyst to the upstream side of the filter. Kuenstler teaches that it is conventional in the art, to utilize a continuous regenerating diesel particulate filter system comprising an oxidation catalyst (9) located on the upstream side of the filter (10) (see Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the teaching of Kuenstler in the Ludecke system, since the use thereof would have provided a means to increase the temperature of the particulate filter.

Response to Arguments

Applicant's arguments filed on 10/3/05 have been fully considered but they are not deemed persuasive. The Applicant argued that the Ludecke reference stops fuel injection as opposed to restrict a fuel injection quantity, as claimed. The Examiner respectfully disagrees, since the Ludecke reference discloses one of the throttles is closed and the injectors on the associated bank are shut off so that the engine then operates completely with power developed in the other active cylinder bank, i.e, some of the fuel injectors are shut off and the rest of the fuel injectors are still on to inject fuel into the active cylinder bank (see col. 6, lines 6-15); therefore, a fuel injection quantity is restricted during the filter regeneration.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final

action.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (571) 272-4866. The examiner can normally be reached on Monday -Friday from 8:00 a.m.- 5:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Diem Tran
Patent Examiner
Art unit 3748

DT
December 20, 2005



THOMAS DENION
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